

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION

ORDER NO. 92-155

WASTE DISCHARGE REQUIREMENTS
FOR

BONZI SANITATION LANDFILL, INC. AND
MA-RU HOLDING COMPANY, INC.
CLASS III AND UNCLASSIFIED LANDFILLS
STANISLAUS COUNTY

The California Regional Water Quality Control Board, Central Valley Region,
(hereafter Board) finds that:

1. Bonzi Sanitation Landfill, Inc. and Ma-Ru Holding Company, Inc. (hereafter Discharger) submitted a Load Checking Program, dated 12 June 1991; a Final Closure and Postclosure Maintenance Plan, dated 26 April 1991; a proposed inert waste acceptance program, dated 23 April 1991; a report of the final design of the ground water remediation system, dated 18 December 1990; a Report of Waste Discharge, dated 22 June 1987, and a site investigation report, dated 8 May 1987.
2. The Final Closure and Postclosure Maintenance Plan applies to existing Class III waste management units (WMUs) which were classified in accordance with California Code of Regulations (CCR), Title 23, Division 3, Chapter 15 (Chapter 15) and Waste Discharge Requirements (WDRs) Order No. 89-043. The Final Closure and Postclosure Maintenance Plan has not been approved by the California Integrated Waste Management Board because of deficiencies which remain to be resolved. These updated WDRs reflect the current status of the facility and specific closure of WMUs.
3. Cleanup and Abatement Order No. 89-185 was adopted by the Board on 22 September 1989. Order No. 89-185 includes requirements for site assessment and construction and operation of a ground water remediation system. Order No. 89-185 also includes requirements for the Discharger to replace domestic drinking water supplies should the Bonzi Landfill be determined in a public hearing to be the source of contamination or pollution of the water supplies. The Discharger is currently in compliance with Order No. 89-185. WDRs Order No. 90-215 applies to operation of a ground water remediation system which was brought on-line on 1 November 1991. The Discharger is currently in compliance with WDRs Order No. 90-215.
4. The 115-acre disposal facility, comprising Assessor Parcel Number 17-4136-691, is owned by Ma-Ru Holding Company, Inc. and has been operated by Bonzi Sanitation Landfill, Inc. since 1967. The Discharger purchased the site in August 1985 from Rudy and Mary Bonzi. Waste disposal activities have

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occurred within about 60 acres of the site. The site is about 3 miles southwest of Modesto in the northern part of the San Joaquin Valley along the Tuolumne River, in Section 12, T4S, R9E, MDB&M. The facility location and layout are shown in Attachments "A", "B", and "C" which are incorporated herein and made part of this Order.

5. The disposal site consists of four landfill areas totaling approximately 100 acres in which cells are excavated and filled in sequence, as shown on Attachment "B". WMUs I, II, III-A, III-B, III-C have been filled and WMU III-F is currently being filled with inert materials as an unclassified WMU. WMUs III-D, III-E, and IV have been excavated as unclassified WMUs but not filled and have a total capacity of approximately 500,000 cubic yards. WMU IV (26 acres) has been excavated to elevations below 5 feet above the historic high ground water levels.

WASTES AND THEIR CLASSIFICATION

6. Approximately 3 million cubic yards of wastes classified as 'nonhazardous solid waste' or 'inert waste' using the criteria set forth in Chapter 15 have been discharged to WMUs I, II, and III. Discharge of 'nonhazardous solid waste' is prohibited unless discharge is to a lined WMU constructed to Class III containment. Currently, the Discharger does not propose construction of Class III containment systems for unfilled WMUs but requests retaining the potential option for future construction of such containment. The Discharger proposes to continue to discharge inert waste, as specified in Finding No. 7, to unclassified WMUs at a rate of approximately 7,500 cubic yards per year (approximately 9,750 tons per year). Based on this discharge rate, the facility will reach capacity by the years 2017 (WMU III) and 2057 (WMU IV).
7. The Discharger has proposed a specific list of construction and demolition debris materials for discharge as inert waste. These materials include concrete with REBAR, earth, rock, asphalt (cured), mortar, tile, stucco, composition shingles, brick, linoleum, glass, aluminum window frames, gypsum board, scrap rubber, electrical wiring, ductwork, PVC pipe, ductile iron/cast iron pipe, copper tubing, plaster, plastics, stainless steel fixtures, porcelain sinks/toilets/tubs, carpet, and small amounts of untreated residual lumber products. The Discharger has proposed discharge of only concrete, clean earth, and rock to areas within WMU IV that are below the highest anticipated ground water level.

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DESIGN, OPERATION, AND CLOSURE OF THE FACILITY

8. Future site operations will consist of spreading and compacting layers of waste and covering with six inches of daily cover or 12 inches of intermediate cover for areas that will not receive additional waste or final cover within 180 days. Grading around the edge of the active fill area is proposed to prevent surface runoff from entering the buried refuse.
9. The Discharger proposes a phased closure construction schedule starting with WMUs I and II (total 36 months for completion) followed by WMU III-A, III-B, and III-C (total 18 months for completion). Surface water drainage control for closed Class III WMUs is proposed to be by means of minimum 3% slopes on a series of elongated earthen mounds which contain a two-foot thick foundation layer and a minimum one-foot thick low permeability clay soil barrier layer overlain by one foot of vegetated topsoil. Water collected at the base of each slope will be directed along vegetated swales to gravel-lined collection drainage ways and then to one of two unlined runoff retention basins. Current proposed postclosure land use consists of nonirrigated open space with no grazing or other agricultural uses. Operation as a recycling, woodchipping, and truck maintenance and repair facility will continue.
10. The Discharger's data demonstrate that natural geologic materials between the base of Class III landfill unit(s) and ground water will not prevent the impairment of beneficial uses of ground water from the discharge of 'nonhazardous solid wastes' to the Class III landfill units. Therefore, Class III landfill units must be constructed with a composite liner system with synthetic and compacted clay components and a Leachate Collection and Removal System (LCRS) to address attainment of Chapter 15 performance goals. Unclassified landfill units accepting only inert, non-putrescible wastes are not required to be lined or have an LCRS.

DESCRIPTION OF THE SITE

11. Land within 1000 feet of the site is used for housing, open space, and agriculture. Land to the north includes a closed domestic refuse dump and active transfer and recycling station.
12. The SP and SM soils immediately underlying the site consist of fine grained, relatively uniform sands with interbedded silty sands and sandy silts forming

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discontinuous lenses to a depth of 120 feet. Below this depth is a 20 to 40-foot thick hard greenish-gray silty clay aquitard known as the E-Clay or Corcoran Clay. The E-Clay and underlying continental deposits are part of the Tulare Formation. Soils above the E-Clay are permeable with a hydraulic conductivity of approximately 350 ft/day.

13. No active or potentially active faults have been identified at the site. The closest fault to the site is 20 miles away. The maximum ground acceleration at the site that would be caused by the maximum probable earthquake on this fault is estimated at 0.125 based on California Department of Conservation, Division of Mines & Geology, Map Sheet 45, May 1987.
14. The site receives an average of 11.7 inches of precipitation per year as measured at Modesto, California between the years 1940 and 1985. The mean Class A Pan evaporation for this site is 75 inches per year as measured at the Modesto 6SW station between the years 1970 and 1978.
15. The 100-year, 24-hour precipitation event for Modesto is 2.79 inches, as estimated from California Department of Water Resources rainfall depth-duration-frequency data for Modesto.
16. The site is not within a 100-year floodplain.
17. The uppermost aquifer at the site extends to a depth of 120 feet and generally responds as a single unconfined to semiconfined hydrogeologic unit. The aquifer consists of unconsolidated sandy deposits that overlie the E-Clay and is heterogeneous due to the frequent occurrence of discontinuous less permeable clayey sand and silt strata. The E-Clay acts as a regional aquitard and locally provides a lower boundary for the largely unconfined, uppermost aquifer.
18. The first water bearing formation is approximately five feet below the base of the WMUs. Ground water flow velocities are estimated at approximately one foot per day. The river exerts a major influence on the upper aquifer acting as a discharge boundary during low water and a recharge boundary during high water. Irrigation losses from surrounding agricultural land are another major recharge source. The hydraulic gradient is generally to the north-northwest toward the Tuolumne River. During periods of high river flow, the water

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table rises in elevation and the hydraulic gradient is to the southwest away from the river in the northern part of the landfill.

19. The highest anticipated ground water elevation is at a depth of approximately 17 feet below ground surface. However, the Discharger disposed nonhazardous solid wastes at approximately 25 feet below ground surface because the ground water elevation at the time was generally at 30 feet or more below ground surface. As per earlier WDRs for the facility, Chapter 15 requires a five foot separation between historic high ground water and waste. Ground water monitoring indicates that ground water beneath WMU I and off-site to the west and northwest is polluted with volatile organic compounds (VOCs). A major release of VOCs and total dissolved solids to ground water apparently occurred in 1983 when waste was inundated with ground water during the historic high ground water levels.
20. The Discharger started operation of a ground water extraction and treatment system in late 1991 pursuant to Order No. 90-215. The extraction system consists of three extraction wells which pump continuously from the uppermost aquifer at a total rate of approximately 30 to 200 gpm. Extracted ground water is piped to a single tower air stripper treatment system where volatile organic chemicals are removed. Treated ground water is then piped to a retention pond lined with 40-mil solar resistant PVC geomembrane. Between 43,000 and 288,000 gallons per day of treated ground water is proposed to augment drip irrigation water for a vineyard southwest of the landfill site.
21. The quality of background ground water has generally been affected by offsite agricultural and other land use practices resulting in relatively high concentrations of nitrate and total dissolved solids. Nitrate in background ground water ranges in concentration from approximately 10 to 100 mg/l as compared with the primary maximum contaminant level drinking water standard of 45 mg/l (as NO_3). Total dissolved solids in background ground water ranges in concentration from approximately 200 to 700 mg/l and is frequently higher than the secondary maximum contaminant drinking water standard of 500 mg/l but below the recommended upper limit secondary drinking water standard of 1000 mg/l.
22. The beneficial uses of ground water are domestic, municipal, agricultural, and industrial supply.

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23. Surface drainage is to the Tuolumne River which is tributary to the San Joaquin River. The San Joaquin River flows into the Sacramento-San Joaquin Delta and San Francisco Bay.
24. The beneficial uses of these surface waters are domestic, municipal, agricultural, and industrial supply; ground water recharge; power generation; recreation; esthetic enjoyment; navigation; fresh water replenishment; and preservation and enhancement of fish, wildlife and other aquatic resources.

CEQA CONSIDERATIONS

25. A Negative Declaration for the Bonzi Sanitation Landfill Final Closure and Postclosure Maintenance Plan and new Solid Waste Facility Permit (SWFP) was prepared by the Stanislaus County Department of Environmental Resources. The Notice of Determination (State Clearinghouse No. 92012070) is dated 26 March 1992.
26. The action to update WDRs for this landfill is exempt from the provisions of the California Environmental Quality Act (Public Resources Code §21000, et seq.), in accordance with Title 14, CCR, Section 15301.

OTHER LEGAL REFERENCES

27. The Water Quality Control Plan, Second Edition, for the San Joaquin River Basin (5C) was adopted. This Order implements the water quality objectives stated in that Plan. Furthermore, this Order implements the prescriptive standards and performance goals of Chapter 15, as adopted by the State Water Resources Control Board on 18 October 1984.
28. The Board has notified the Discharger and interested agencies and persons of its intention to revise the WDRs for this facility.
29. In a public hearing, the Board heard and considered all comments pertaining to this facility and discharge.

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IT IS HEREBY ORDERED THAT Order No. 89-043 is rescinded and Bonzi Sanitary Landfill and Ma-Ru Holding Company, in order to meet the provisions of Division 7 of the California Water Code and the regulations adopted thereunder, shall comply with the following:

A. PROHIBITIONS:

1. The discharge of 'hazardous waste' or 'designated waste' at this facility is prohibited. For the purposes of this Order, the term 'hazardous waste' or 'designated waste' is as defined in Chapter 15.
2. The discharge of wastes not classified as inert pursuant to Chapter 15 to unlined unclassified WMUs is prohibited.
3. The discharge to the landfill units of liquid or semi-solid waste (i.e., waste containing less than 50 percent solids), except dewatered sewage or water treatment sludge to Class III WMUs as provided in §2523(c) of Chapter 15, is prohibited.
4. The discharge to the landfill units of solid waste containing free liquid or moisture in excess of the waste's moisture holding capacity is prohibited.
5. The discharge of solid or liquid waste or leachate to surface waters, surface water drainage courses, or ground water is prohibited.
6. The discharge of waste other than inert waste to ponded water from any source is prohibited.
7. The discharge of waste within 100 feet of surface waters not related to landfill drainage structures is prohibited.
8. The discharge of wastes which have the potential to reduce or impair the integrity of containment structures or which, if commingled with other wastes in the unit, could produce violent reaction, heat or pressure, fire or explosion, toxic by-products, or reaction products which in turn: a) require a higher level of containment than provided by the unit, b) are 'restricted hazardous wastes', or c) impair the integrity of containment structures, is prohibited.

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B. DISCHARGE SPECIFICATIONS:

General Specifications

1. Wastes shall only be discharged into, and shall be confined to, the landfill waste management unit specifically designed for their containment as shown on Attachments B.
2. The Discharger shall implement load checking procedures necessary to preclude the discharge of 'hazardous waste', 'designated waste' or unauthorized waste at this facility.
3. Prior to the discharge of waste to the waste management unit, all wells within 500 feet of the unit shall have sanitary seals which meet the requirements of the Stanislaus County Department of Environmental Resources or Department of Water Resources shall be properly abandoned. A record of the sealing and/or abandonment of such wells shall be sent to the Board and to the State Department of Water Resources.
4. Water used for waste management unit maintenance shall be limited to the minimum amount necessary for dust control, construction moisture conditioning, and establishment of vegetation.
5. Waste shall not be discharged below 58 feet mean sea level (MSL). A minimum separation of 5 feet shall be maintained between 'nonhazardous solid waste' as defined in Chapter 15 and the highest anticipated elevation of ground water including the capillary fringe. Discharge of 'inert waste' as defined in Chapter 15 shall be above the highest anticipated ground water elevation. For unclassified WMU cells which have been excavated, only clean earth fill, rock, and broken concrete shall be discharged to areas below highest anticipated ground water elevation. No additional excavation of unclassified WMU cells shall occur below highest anticipated ground water elevation.
6. Class III WMUs shall be designed, constructed, and closed in accordance with Chapter 15 and this Order and approved by Board staff prior to

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construction and again prior to operation. The plans submitted to the Board for review and approval shall include, but not be limited to, the engineered design plans for the WMU, the construction specifications, construction quality assurance (CQA) plans, and revised water quality monitoring plans. The final construction report shall include, but not be limited to, construction record drawings for the WMU, a CQA report with a written summary of the CQA program and all test results and analyses, and a certification as described in Specification B.22.

General Class III WMU Construction

7. Class III landfill units shall be constructed with a composite liner system with synthetic and compacted clay components and a blanket type Leachate Collection and Removal System (LCRS).
8. Materials used to construct liners shall have appropriate properties to ensure containment of wastes over the operating life, closure, and post-closure maintenance period of the WMU. Materials used to construct LCRSs shall have appropriate physical and chemical properties to ensure the required transmission of leachate over the life of the landfill and the post-closure maintenance period.
9. Clay liners and caps (clay barrier layers) for the landfill shall have a hydraulic conductivity of 1×10^{-6} cm/s or less and a minimum relative compaction of 90 percent. Hydraulic conductivities of clay barrier materials shall be determined by laboratory tests using solutions with applicable properties. Hydraulic conductivities determined through laboratory methods shall be confirmed by field testing of the finished barrier layer. Construction methods and quality assurance procedures shall be sufficient to ensure that all parts of the barrier layer meet the hydraulic conductivity, moisture content, and compaction requirements. Proposed design parameters (e.g., soil type, Atterburg limits, moisture content, relative compaction), construction methods, and quality assurance procedures for clay barrier layers shall be utilized in the construction of a test pad prior to final construction to ensure adequacy of the design, construction, and testing methods.
10. The LCRS shall be designed, constructed, and maintained to collect twice the anticipated daily volume of leachate generated by the WMU

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and to prevent the buildup of hydraulic head on the underlying liner at any time. The depth of fluid in any LCRS sump shall be kept at a minimum.

11. During the rainy season a minimum one-foot thickness of low permeability cover shall be maintained over all but the active disposal area of the landfill. The active disposal area shall be confined to the smallest area practicable based on the anticipated quantity of waste discharge and other waste management facility operations.
12. Methane and other landfill gases shall be adequately vented, removed from the landfill units, or otherwise controlled to prevent the danger of explosion, adverse health effects, nuisance conditions, or the impairment of beneficial uses of water due to migration through the vadose (unsaturated) zone.
13. Synthetic liners shall have a thickness of no case less than 40 mils. The synthetic liner shall be protected from punctures by a geotextile and/or engineered fill material.
14. Leachate generation by a landfill or surface impoundment unit LCRS shall not exceed 85% of the design capacity of a) the LCRS, or b) the sump pump. If leachate generation exceeds this value and/or if the depth of fluid in an LCRS exceeds the level needed for safe pump operation, the Discharger shall immediately cease discharge of sludges and other high-moisture wastes to the landfill unit and shall notify the Board in writing within seven days. Notification shall include a time table for corrective action necessary to reduce leachate production.

WMU Closure Specifications

15. Landfill closure shall be under the direct supervision of a California registered civil engineer or certified engineering geologist.
16. The closed landfill shall be provided with at least two permanent monuments, installed by a licensed land surveyor, from which the location and elevation of all wastes, containment structures, and monitoring facilities can be determined throughout the post-closure maintenance period.

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17. At closure, Class III landfill WMUs shall receive a final cover which is designed and constructed to function with minimum maintenance and consists, at a minimum, of a two-foot thick foundation layer which may contain waste materials, overlain by a one-foot thick clay barrier layer, and finally by a one-foot thick vegetative soil layer, or an engineered equivalent final cover approved by the Board pursuant to Subsections 2510(b) and (c) of Chapter 15. Unclassified WMUs shall be covered and graded as appropriate to prevent ponding and erosion.
18. Vegetation shall be planted and maintained over each closed landfill unit. Vegetation shall be selected to require a minimum of irrigation and maintenance and shall have a rooting depth not in excess of the vegetative layer thickness.
19. Closed landfill units shall be graded to at least a three percent (3%) grade and maintained to prevent ponding.
20. Areas with slopes greater than ten percent, surface drainage courses, and areas subject to erosion by wind or water shall be designed and constructed to prevent such erosion.
21. At closure of surface impoundments, all residual wastes, including liquids, sludges, precipitates, settled solids, liner materials, and adjacent natural geologic materials contaminated by wastes, shall be completely removed and discharged to a WMU approved by the Board. If after reasonable attempts to remove contaminated natural geologic materials, the Discharger demonstrates that removal of all remaining contamination is infeasible, the impoundment shall be closed as a landfill pursuant to §2581 of Chapter 15.

Supervision and Certification of Construction

22. All containment structures shall be designed and constructed under the direct supervision of a California registered civil engineer or a certified engineering geologist and shall be certified by that individual as meeting the prescriptive standards and performance goals of Chapter 15 and the approved design plans and specifications prior to waste discharge.

Water Quality Protection Standard

23. The Water Quality Protection Standard for each WMU, as defined in §2550.2 of Chapter 15, shall consist of constituents of concern, their concentration limits, the point of compliance, and all water quality monitoring points. Constituents of concern, as defined in §2550.3 of Chapter 15, shall include all waste constituents, their reaction products, and hazardous constituents that are reasonably expected to be in or derived from waste contained in the WMUs. Concentration limits in each medium shall consist of background concentrations of each constituent of concern or concentrations greater than background pursuant to §2550.4 of Chapter 15.

Protection from Storm Events

24. Waste management units (WMUs) shall be designed, constructed, and operated to prevent inundation or washout due to floods with a 100-year return period.
25. Precipitation and drainage control systems shall be designed and constructed to accommodate the anticipated volume of precipitation and peak flows from surface runoff under 100-year, 24-hour precipitation conditions.
26. Surface drainage from tributary areas and internal site drainage shall not contact or percolate through wastes.
27. Annually, prior to the anticipated rainy season, but no later than 1 November, any necessary erosion control measures shall be implemented, and any necessary construction, maintenance, or repairs of precipitation and drainage control facilities shall be completed to prevent erosion or flooding of the facility and to prevent surface drainage from contacting or percolating through wastes.

C. PROVISIONS:

1. The Discharger shall, in a timely manner, remove and relocate any wastes discharged at this facility in violation of this Order.

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2. The Discharger shall maintain a copy of this Order at the facility and make it available at all times to facility operating personnel, who shall be familiar with its contents, and to regulatory agency personnel.
3. The Discharger shall notify the Board in writing of any proposed change in ownership or responsibility for construction or operation of the WMUs. The Discharger shall also notify the Board of a material change in the character, location, or volume of the waste discharge and of any proposed expansions or closure plans. This notification shall be given 180 days prior to the effective date of the change and shall be accompanied by an amended Report of Waste Discharge and any technical documents that are needed to demonstrate continued compliance with these WDRs.
4. The Discharger shall comply with Monitoring and Reporting Program No. 92-155.
5. The Discharger shall maintain legible records of the volume and type of each waste discharged at each WMU and the manner and location of discharge. Such records shall be maintained at the facility until the beginning of the post-closure maintenance period. These records shall be available for review by representatives of the Board and of the State Water Resources Control Board at any time during normal business hours. At the beginning of the post-closure maintenance period, copies of these records shall be sent to the Regional Board.
6. The Discharger shall implement the approved Load Checking Program (LCP) dated 12 June 1991 and any required updates to the LCP. The Load Checking Program shall ensure that only inert wastes are discharged to unclassified waste management units and shall include:
 - a. Number of random loads to be checked per week and/or month
 - b. Description of training program for on-site personnel and contract waste haulers
 - c. Record keeping and reporting program
 - d. Program implementation schedule
 - e. Alternatives for waste found not in compliance with this Order
 - f. Description of signing of facility and transfer stations.

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7. If the Discharger, through a detection monitoring program, or the Board finds that there is a statistically significant evidence for a release from any WMU for any monitoring parameter or constituent of concern (established pursuant to Monitoring and Reporting Program No. 92-155) or significant physical evidence of a release from any WMU, the Discharger shall notify the Board or acknowledge the Board's finding in writing within seven days, and shall implement verification procedures within 30 days, pursuant to §2550.7(e)(8)(E) of Chapter 15. Within 90 days, the Discharger shall submit to the Board the results of the resampling and either:
 - a. a report that demonstrates pursuant to §2550.8(k)(7) of Chapter 15 that a source other than the WMU caused the evidence of a release, or that the evidence resulted from an error in sampling, analysis, or evaluation, or from natural variation in ground water, surface water, or the unsaturated zone; or
 - b. an amended Report of Waste Discharge for the establishment of an evaluation monitoring program, pursuant to §2550.9 of Chapter 15, to assess the nature and extent of the release from WMUs and to design a corrective action program meeting the requirements of §2550.10 of Chapter 15. Within 180 days of determining statistically significant evidence of a release, the Discharger shall submit an engineering feasibility study pursuant to §2550.8(k)(6) for corrective action program necessary to meet the requirements of §2550.10 of Chapter 15.
8. Within 90 days of establishing an evaluation monitoring program, the Discharger shall submit to the Board an amended Report of Waste Discharge pursuant to §2550.9(d) of Chapter 15. The amended Report of Waste Discharge shall address the establishment of a corrective action program pursuant to §2550.10 of Chapter 15.
9. The compliance period as defined in §2550.6 of Chapter 15 shall begin each time the Discharger initiates an evaluation monitoring program and shall continue until the Discharger can demonstrate either that the WMU has been in continuous compliance with the water quality protection standard for a period of three consecutive years, or that a release did not occur pursuant to §2550.9(f).

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10. The Discharger or persons employed by the Discharger shall comply with all notice and reporting requirements of the State Department of Water Resources with regard to the construction, alteration, destruction, or abandonment of all monitoring wells used for compliance with this Order or with Monitoring and Reporting Program No. 92-155, as required by Sections 13750 through 13755 of the California Water Code.
11. The Discharger shall immediately notify the Board of any flooding, equipment failure, slope failure, or other change in site conditions which could impair the integrity of waste or leachate containment facilities or precipitation and drainage control structures.
12. The Discharger shall maintain financial assurances for closure and postclosure maintenance, pursuant to Title 14, CCR, Articles 3.4 and 3.5 and §2580 of Chapter 15. The Discharger shall submit for approval and maintain financial assurances for initiating corrective action for all known and reasonably foreseeable releases, pursuant to §2550.0(b) of Chapter 15. The Discharger shall submit a report every five years starting 1 July 1992 that either validates the viability of the financial assurances mechanism or proposes and substantiates any needed changes.
13. The Discharger shall maintain waste containment facilities and precipitation and drainage controls, and shall continue to monitor ground water, leachate from the landfill units, the vadose zone, and surface waters per Monitoring and Reporting Program No. 92-155 throughout the post-closure maintenance period.
14. The post-closure maintenance period shall continue until the Board determines that remaining wastes in all WMUs will not threaten water quality.
15. The Discharger shall comply with the Standard Provisions and Reporting Requirements, dated 1 March 1991, which are hereby incorporated into this Order.

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16. The owner of the waste management facility shall have the continuing responsibility to assure protection of usable waters from discharged wastes and from gases and leachate generated by discharged waste during the active life, closure, and post-closure maintenance period of the landfill and during subsequent use of the property for other purposes.
17. In the event of any change in ownership of this waste management facility, the Discharger shall notify the succeeding owner or operator in writing of the existence of this Order. A copy of that notification shall be sent to the Board.
18. The Discharger shall complete the following tasks in accordance with the time schedule listed below:

| | <u>Task</u> | <u>Compliance Date</u> |
|-----|-------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------|
| 1. | Begin Closure Construction for WMUs I, II, III-A, III-B, III-C | (Within 6 months after Final Closure Plan approval date) |
| 2. | Submit Final Closure Construction Progress Reports | (Every 6 months from Plan approval date) |
| 3. | Complete Final Closure Construction | (In accordance with approved Final Closure Plan) |
| 4. | Submit Final Construction Report for Closure Pursuant to Specification B.6 | (Within 3 months after completion of Final Closure construction) |
| 5. | Submit Proposed Revised Leachate Monitoring System | 1 January 1993 |
| 19. | The Discharger shall comply with all applicable provisions of Chapter 15 that are not specifically referred to in this Order. | |

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WATER QUALITY PROTECTION STANDARD

The Water Quality Protection Standard, as defined in §2550.2 of Chapter 15, consists of constituents of concern, their concentration limits, the point of compliance, and all water quality monitoring points.

Constituents of concern, as defined in §2550.3 of Chapter 15, include all waste constituents, reaction products, and hazardous constituents that are reasonably expected to be in or derived from waste contained in the waste management units (WMUs). Concentration limits in each medium shall consist of background concentrations of each constituent of concern, or concentrations greater than background pursuant to §2550.4 of Chapter 15.

CORRECTIVE ACTION MONITORING PROGRAM

Waste management units (WMUs) at the Bonzi Sanitation Landfill, Incorporated disposal facility have released constituents of concern (volatile organic chemicals as analyzed by EPA Methods 601 and 602 and total dissolved solids) to ground water in violation of the Water Quality Protection Standard. The Discharger is currently implementing a Corrective Action Program (CAP) pursuant to §2550.1(a)(4) of Chapter 15 to achieve compliance with the Water Quality Protection Standard.

In conjunction with the CAP, the Discharger shall implement a water quality monitoring program pursuant to §2550.10(d) of Chapter 15 to demonstrate the effectiveness of the CAP. Should the Board or Discharger determine that the CAP is not effective and no longer satisfies §2550.10 of Chapter 15, then the Discharger shall submit an amended report of waste discharge to make appropriate changes in the program (§2550.10(i) and (j) of Chapter 15).

Corrective action measures may be terminated after the Discharger demonstrates to the satisfaction of the Board that concentrations of constituents of concern are reduced to levels below their respective concentration limits and an approved Detection Monitoring Program is incorporated in the waste discharge requirements (§2550.10(f) and (g) of Chapter 15).

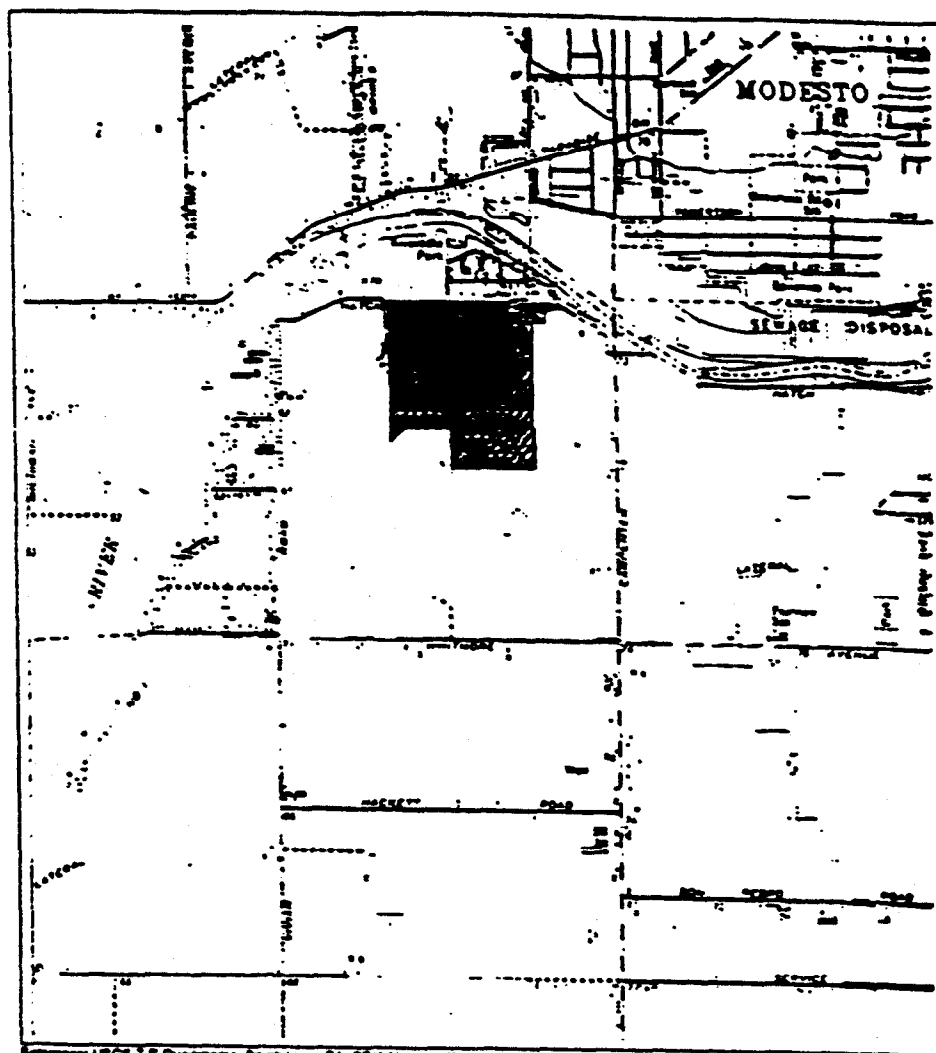
MONITORING AND REPORTING PROGRAM
 BONZI SANITATION LANDFILL, INC. AND
 MA-RU HOLDING COMPANY, INC.
 CLASS III AND UNCLASSIFIED LANDFILLS
 STANISLAUS COUNTY

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86-5B; 86-6A; 86-6B; 86-7A; 86-7B; 86-8; 86-9; 86-10; 86-11; and 88-1 shall, at a minimum, be sampled and analyzed as follows:



| <u>Parameter/Constituent</u> | <u>Report in Units of</u> | <u>Sampling¹ Frequency</u> |
|----------------------------------------------------------|-------------------------------|-------------------------------------------|
| Elevation | MSL (0.01 foot) | Quarterly |
| Temperature (field) | °F | Quarterly |
| Specific Conductance (field) | µmhos/cm | Quarterly |
| pH (field) | pH units | Quarterly |
| Total Dissolved Solids | mg/l | Quarterly |
| Chloride | mg/l | Quarterly |
| Nitrate (as N) | mg/l | Quarterly |
| Volatile Organics ² | µg/l | Quarterly |
| Arsenic ³ | mg/l | Annually |
| Barium | mg/l | Annually |
| Total Chromium | mg/l | Annually |
| Dissolved Iron | mg/l | Annually |
| Manganese | mg/l | Annually |
| Nickel | mg/l | Annually |
| Vanadium | mg/l | Annually |
| Zinc | mg/l | Annually |
| Expanded List of Constituents of Concern ⁴ | µg/l or mg/l | Once Every 5 Years |

- ¹ Quarterly constituents may be monitored annually for monitoring wells 4; 6; 84-9; 85-7; 85-12; 86-4; 86-7A; 86-7B; 86-8. Annual monitoring shall be conducted during the first quarter of each year. The frequency of once every 5 years shall start with sampling in the first quarter of 1994.
- ² EPA Methods 601 and 602, EPA Method 624, or EPA Method 8240 shall be used for analysis of volatile organics. Method detection limits and practical quantitation limits shall be reported. All peaks shall be reported, including those which cannot be quantified and/or specifically identified.
- ³ Atomic Absorption (AA) shall be used for analysis of Arsenic.

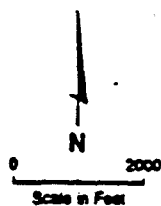


Reference: USGS 7.5' Quadrangle, Brush Lake, CA. SE/4 Modesto West

EXPLANATION:

-  Permitted Landfill Boundary
-  Property Boundary

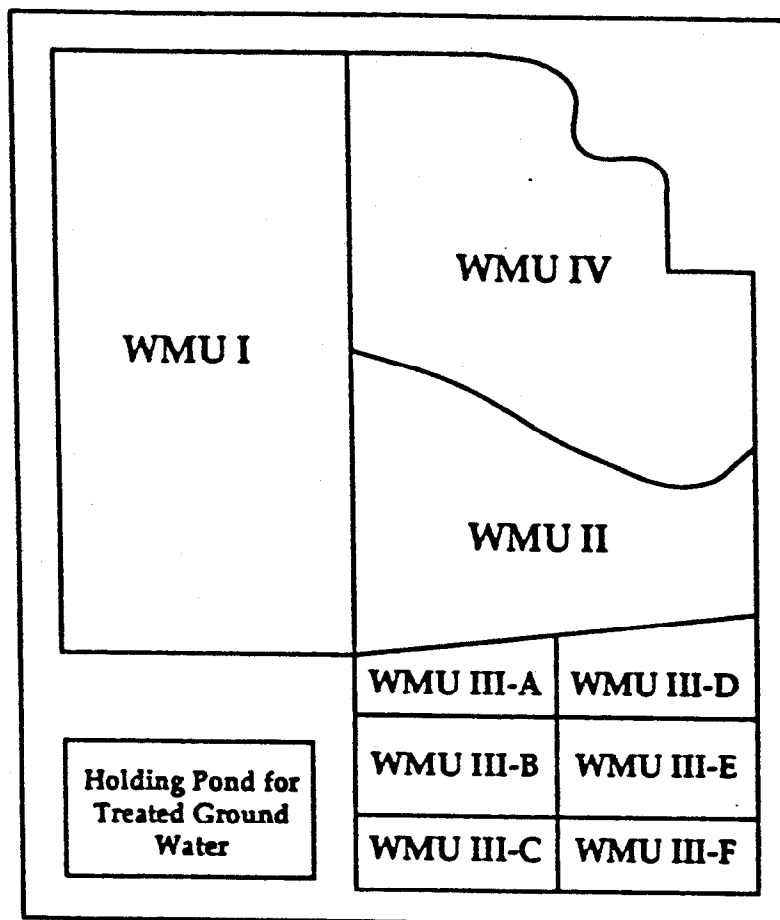
DAMES & MOORE
15066-017-128



SITE LOCATION MAP

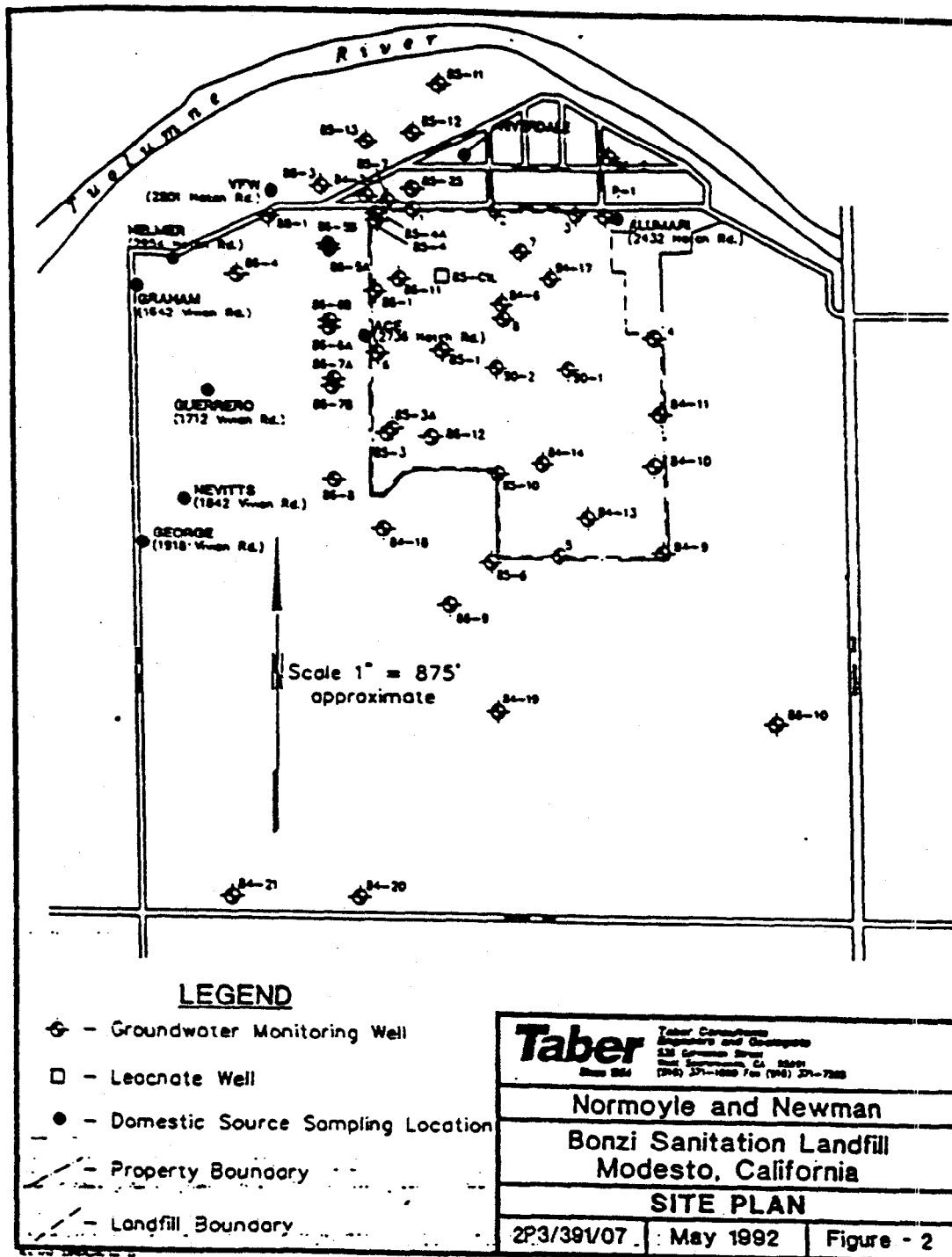
Bonzi Sanitation Landfill
Modesto, California
APRIL 1991
FIGURE 1

ATTACHMENT "A"
Bonzi Sanitation Landfill
Bonzi Sanitation Landfill, Inc. and
Ma-Ru Holding Company, Inc.
Waste Discharge Requirements
Stanislaus County
T4S R9E Sec 12 MDB&M
Site Location Map



0 800 1600 Feet

ATTACHMENT "B"
Bonzi Sanitation Landfill
Bonzi Sanitation Landfill, Inc. and
Ma-Ru Holding Company, Inc.
Waste Discharge Requirements
Stanislaus County
T4S R9E Sec 12 MDB&M
Waste Management Units



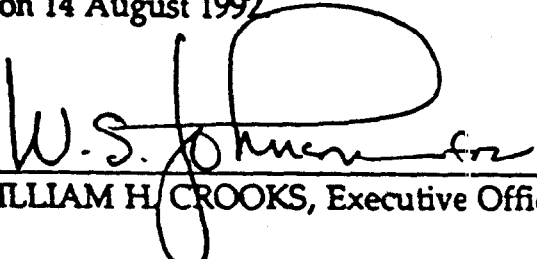
ATTACHMENT "C"
 Bonzi Sanitation Landfill
 Bonzi Sanitation Landfill, Inc. and
 Ma-Ru Holding Company, Inc.
 Waste Discharge Requirements
 Stanislaus County
 T4S R9E Sec 12 MDB&M
 Water Quality Monitoring Facilities

WASTE DISCHARGE REQUIREMENTS
BONZI SANITATION LANDFILL, INC. AND
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CLASS III AND UNCLASSIFIED LANDFILLS
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20. The Board will review this Order periodically and will revise these requirements when necessary.

I, WILLIAM H. CROOKS, Executive Officer, do hereby certify that the foregoing is a full, true, and correct copy of an Order adopted by the California Regional Water Quality Control Board, Central Valley Region, on 14 August 1992


WILLIAM H. CROOKS, Executive Officer

Attachments

WAC
8/18/92

MONITORING AND RESTORATION PROGRAM
BONZI SANITATION LANDFILL, INC. AND
MA-RU HOLDING COMPANY, INC.
CLASS III AND UNCLASSIFIED LANDFILLS
STANISLAUS COUNTY

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Ground Water and Leachate Monitoring System

The Corrective Action Program ground water monitoring system shall consist of the following monitoring wells and leachate wells:

Background (6 wells):

84-11; 84-19; 84-20; 84-21; 86-9; and 86-10

Compliance Point/Downgradient (37 wells):

1; 2; 3; 4; 6; 84-6; 84-9; 84-10; 84-13; 84-18; 84-24; 85-3; 85-3A; 85-4; 85-4A; 85-6;
85-7; 85-10; 85-11; 85-12; 85-13; 85-25; 86-1; 86-2; 86-3; 86-4; 86-5A; 86-5B;
86-6A; 86-6B; 86-7A; 86-7B; 86-8; 86-11; 86-12; 88-1; and P-1

Leachate (one well): 85-C1L

Leachate well 85-C1L is partially obstructed thereby impairing the ability to monitor the depth and waste characteristics of leachate. The Discharger shall submit by 1 January 1993 a proposed revised leachate monitoring system to ensure reasonably accurate monitoring and potential extraction of leachate.

The Discharger may propose, for approval, modifications in the monitoring system. Such modifications may include removal of monitoring wells from the system and replacement with existing wells or new wells. Monitoring wells proposed for permanent deletion from the system shall be properly destroyed in accordance with the requirements of the Stanislaus County Department of Environmental Resources and the Department of Water Resources.

Ground Water and Leachate Monitoring Parameters,
Constituents, and Frequencies

The ground water surface elevation (in feet and hundredths, M.S.L.) in all ground water and leachate wells shall be measured quarterly to determine the velocity and direction(s) of ground water flow and depth of leachate. This information shall be displayed on a water table contour map and/or ground water flow net for the site.

Leachate wells and ground water monitoring wells 2; 3; 4; 6; 84-9; 84-10; 84-19;
84-24; 85-3; 85-4A; 85-6; 85-7; 85-12; 85-13; 85-25; 86-1; 86-2; 86-3; 86-4; 86-5A;

MONITORING AND REPORTING PROGRAM
BONZI SANITATION LANDFILL, INC. AND
MA-RU HOLDING COMPANY, INC.
CLASS III AND UNCLASSIFIED LANDFILLS
STANISLAUS COUNTY

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- 4 The expanded list of additional constituents of concern shall be based on those constituents specified in Appendices I and II of 40 CFR Part 258 (Subtitle D) that are not already incorporated in the monitoring program. The Discharger may propose, for approval, selected representative monitoring wells for which the additional constituents of concern shall be analyzed.

The following offsite water supply wells shall be sampled on an annual basis for volatile organic chemicals, total dissolved solids, and nitrate: Nevitts, George, Riverdale, Ace Tap, Guerrero, Alumari, VFW, Helmer, and Graham.

Surface Water Monitoring

Surface water flows from on and around WMUs shall be sampled at the point(s) where they leave the facility boundary, during the first storm of the rainy season which produces significant flows. Surface water samples shall be analyzed for the quarterly constituents listed above for ground water, in addition to flow rate, oil and grease, and acute toxicity (EPA Method 600/4-85-013).

GENERAL WASTE MONITORING

The Discharger shall, on a monthly basis, monitor all wastes discharged to landfill waste management units (WMUs) and report to the Board as follows:

| <u>Parameter</u> | <u>Report in Units of</u> | <u>Frequency of Reporting</u> |
|----------------------------------------|-------------------------------|-----------------------------------|
| Quantity discharged | Tons, cubic yards | Semiannually |
| Type of material discharged | — | Semiannually |
| Source(s) of material discharged | — | Semiannually |
| Minimum elevation of discharge | Feet, M.S.L. | Semiannually |
| Capacity of landfill unit remaining | Percent | Semiannually |
| Summary of Load Checking Program | — | Semiannually |

The Discharger shall also notify the Board within 24 hours of significant incidents including, at a minimum, hazardous material spills and other events specified in Provision C.11 of these waste discharge requirements.

MONITORING AND REPORTING PROGRAM
BONZI SANITATION LANDFILL, INC. AND
MA-RU HOLDING COMPANY, INC.
CLASS III AND UNCLASSIFIED LANDFILLS
STANISLAUS COUNTY

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25.122 SF

SAMPLING AND ANALYSIS PLAN

An approved Sampling and Analysis Plan (SAP) shall be maintained for all water quality monitoring activities. The SAP shall include specific methods for leachate, surface water, and ground water monitoring quality assurance/quality control (QA/QC) including well purging, sample collection, sample handling, chain of custody control, analytical procedures, and laboratory QC.

REPORTING

In reporting the monitoring data, the Discharger shall arrange the data in tabular form so that the date, the constituents, the concentrations, and the units are readily discernible. The data shall be summarized in such a manner so as to illustrate clearly the effectiveness of the Corrective Action Program.

Quarterly, semiannual, and annual monitoring reports shall be submitted to the Board by the 15th day of the month following the calendar quarter in which the samples were taken or observations made.

The results of any monitoring done more frequently than required at the locations specified herein shall be reported to the Board.

A report shall be submitted to the Board by 15 February of each year containing both tabular and graphical summaries of the monitoring data obtained during the previous year. The Discharger may combine this information with the fourth quarter monitoring report for the facility.

The Discharger shall implement the above monitoring program on the effective date of this Order.

Ordered by:


WILLIAM H. CROOKS, Executive Officer

14 August 1992
(Date)

WAC
8/18/92